

IN THE CLAIMS:

Please amend the claims as follows:

1.-3. (cancelled)

4. (currently amended) A method of manufacturing a silicon single crystal ingot by Czochralski method or MCZ method, ~~wherein silicon single crystal pulling is performed in a range of including the steps of controlling the nitrogen concentration and oxygen concentration within a melt chamber, which falls to fall~~ within an area in a graph in which the oxygen concentration and the nitrogen concentration are plotted along the horizontal axis and the vertical axis of the graph, respectively, on or below a first straight line connecting a point at which the nitrogen concentration is 3×10^{15} atoms/cm³ when the oxygen concentration is 7×10^{17} atoms/cm³ and a point at which the nitrogen concentration is 3×10^{14} atoms/cm³ when the oxygen concentration is 1.6×10^{18} atoms/cm³, and pulling the silicon single crystal in the melt chamber while controlling the nitrogen and oxygen concentration so that ~~wherein~~ the nitrogen concentration increases gradually from a shoulder portion to a tail portion of the silicon single crystal ingot ~~whereas and~~ the oxygen concentration decreases gradually from the shoulder portion to the tail portion, and wherein the nitrogen and oxygen concentrations make a second line from the shoulder portion to the tail portion of the silicon single crystal ingot substantially parallel to the first straight line.

5. (currently amended) A method of manufacturing a silicon single crystal ingot by Czochralski method or MCZ method, ~~wherein silicon single crystal pulling is performed in including the steps of controlling a range of nitrogen concentration and oxygen concentration within a melt chamber to fall, which falls~~ within an area in a graph in which the oxygen concentration and the nitrogen concentration are plotted along the horizontal axis and the vertical axis of the graph, respectively, on or below a first straight line connecting a point at which the nitrogen concentration is 3×10^{15} atoms/cm³ when the oxygen concentration is 7×10^{17} atoms/cm³ and a point at which the nitrogen concentration is 3×10^{14} atoms/cm³ when the oxygen concentration is 1.6×10^{18} atoms/cm³, wherein and pulling the silicon single crystal in the melt chamber while controlling the nitrogen and oxygen concentration so that the nitrogen concentration increases gradually from a shoulder portion to a tail portion of the silicon single crystal ingot ~~whereas and~~ the oxygen concentration decreases gradually from the shoulder portion to the tail

portion, and, wherein the nitrogen concentration in the tail portion is set less than 3×10^{15} atoms/cm³.

6.-7. (cancelled)

8. (previously amended) A silicon ingot prepared by Czochralski or MCZ method, wherein nitrogen concentration of a tail portion of the silicon ingot is from 1×10^{15} atoms/cm³ to 3×10^{15} atoms/cm³, and wherein oxygen concentration is lowered corresponding to an increase in nitrogen concentration from a shoulder portion to the tail portion such that the nitrogen concentration and the oxygen concentration along a longitudinal direction of the silicon ingot vary in accordance with a second line in a graph in which the oxygen concentration and the nitrogen concentration are plotted along the horizontal axis and the vertical axis of the graph, respectively, substantially parallel to a first straight line connecting a point at which the nitrogen concentration is 3×10^{15} atoms/cm³ when the oxygen concentration is 7×10^{17} atoms/cm³ and a point at which the nitrogen concentration is 3×10^{14} atoms/cm³ when the oxygen concentration is 1.6×10^{18} atoms/cm³.

9. (previously presented) The silicon ingot according to claim 8, wherein the oxygen concentration in the silicon ingot is controlled corresponding to a change in the nitrogen concentration in the silicon ingot.

10.-21. (cancelled)

22. (currently amended) A method of manufacturing the epitaxial silicon wafer prepared from the silicon wafer substrate sliced from the silicon single crystal ingot manufactured by the method recited in claim 4, ~~comprising~~ including the steps of:
grinding the silicon wafer substrate, and
performing epitaxial growth on the ground silicon wafer.

23.-24. (cancelled)

25. (currently amended) A method of manufacturing the epitaxial silicon wafer prepared from the silicon wafer substrate sliced from the silicon single crystal ingot recited in claim 8, ~~comprising~~ including the steps of:

grinding the silicon wafer substrate, and
performing epitaxial growth on the ground silicon wafer.

26.-41. (cancelled)

42. (currently amended) A method of manufacturing an epitaxial wafer comprising the steps of:

pulling a silicon ingot by Czochralski method or MCZ method in a melt chamber,
controlling the doping of, ~~wherein~~ nitrogen is doped in the silicon ingot such that a nitrogen concentration in a tail portion of the silicon ingot is ~~set to be~~ less than 3×10^{15} atoms/cm³ and ~~wherein~~ controlling an oxygen concentration in the silicon ingot ~~is adjusted~~ corresponding to a change of the nitrogen concentration in the silicon ingot:

slicing the silicon ingot to obtain a silicon wafer; and
performing epitaxial growth on the sliced silicon wafer.

43. (cancelled)